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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/551,069

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Peter David Ransome

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EXAMINER

BALAOING, ARIEL A

ART UNIT

PAPER NUMBER

2617

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/551,069	Applicant(s) RANSOME ET AL.	
	Examiner ARIEL BALAOING	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-3, 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over LABORDE (US 5,303,287) in view of HASHIKUKI et al (US 6,141,392).

Regarding claim 1, LABORDE discloses a communications network **10** comprising: two or more cell sites for communication with wireless terminals, at least one of the cell sites having multiple receive antennas (col. 3, line 63-col. 4, line 11; col. 9, line 4-14; integrated PCN/DCN system which includes micro-cells using multiple receive antennas); a central site having one or more controllers (col. 5, line 17-35; col. 9, line 48-60; base station controller and diversity controller); a switch system through which the one or more controllers are connected to the two or more cell sites (col. 6, line 52-64; col. 10, line 1-15; distribution network and multiplexers provide switching between the network and cells); a cell selector that uses a diversity technique to select one of the cell sites from the two or more cell sites for reception from a particular wireless terminal and connects the selected cell site to a respective controller through the switch (col. 5, line 17-35; col. 9, line 48-60; handoff control and cell selection are provide by the controllers); and an antenna selector that uses a diversity technique to select the receive antennas of the multiple receive antenna of the selected cell site (col. 9, line 4-14; micro-diversity of multiple receive antennas). However, LABORDE does not expressly disclose selecting one of receive antennas of the multiple receive antennas. In the same field of endeavor, HASHIKUKI discloses an antenna selector that uses a diversity technique to select one of the receive antennas of a multiple

receive antennas of a selected cell site (col. 1, line 35-54; col. 2, line 28-34; **222**-Figure 2). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LABORDE to include the teachings of HASHIKUKI, since the use of selecting one of a multiple of antennas can be used to select a receive antenna with the best characteristics for signal reception.

Regarding claim 2, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. LABORDE further discloses wherein the cell selector is in the central site (col. 5, line 17-35; col. 9, line 48-60).

Regarding claim 3, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. The combination of LABORDE and HASHIKUKI further discloses wherein the antenna selector is in the one or more controllers (HASHIKUKI - col. 2, line 28-34; **222**-Figure 2).

Regarding claim 6, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of LABORDE and HASHIKUKI does not expressly disclose wherein: relative to the two or more cell sites, the cell selector is arranged before the switch system and the antenna selector is arranged after the switch system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Regarding claim 7, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of LABORDE and

HASHIKUKI does not expressly disclose wherein: related to the two or more cell sites, the cell selector and the antenna selector are arranged before the switch system. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Regarding claim 8, LABORDE discloses a communication network **10**, comprising: a plurality of cell sites which receive a signal from a wireless terminal, a cell site having multiple receive antennas (col. 3, line 63-col. 4, line 11; col. 9, line 4-14; integrated PCN/DCN system which includes micro-cells using multiple receive antennas); and a first means for using a diversity technique to select one of the cell sites (col. 5, line 17-35; col. 9, line 48-60; handoff control and cell selection are provide by the controllers); second means for using a diversity technique to select multiple receive antennas of the selected one of the cell sites (col. 9, line 4-14; micro-diversity of multiple receive antennas); and third means for providing communication between controller and the selected multiple receive antennas of the selected one of the cell sites (col. 6, line 52-64; col. 10, line 1-15; distribution network and multiplexers provide switching between the network and cells). However, LABORDE does not expressly disclose wherein each cell site includes multiple receive antennas; and selecting one of receive antennas of the multiple receive antennas. In a similar field of endeavor, HASHIKUKI discloses a plurality of cell sites [**Figure 1**] which receive a signal from a wireless terminal, each cell site having multiple receive antennas (Figure 1 and 2); and

a means for using a diversity technique to select one of a multiple receive antennas of a selected cell site (col. 1, line 35-54; col. 2, line 28-34; **222**-Figure 2). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify LABORDE to include the teachings of HASHIKUKI, since the use of selecting one of a multiple of antennas can be used to select a receive antenna with the best characteristics for signal reception.

Regarding claim 9, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. LABORDE further discloses wherein: the third means comprises a switch (col. 6, line 52-64; col. 10, line 1-15). However, the combination of LABORDE and HASHIKUKI does not expressly disclose the first means is on one side of the switch; and the second means is on an opposite side of the switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Regarding claim 10, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. LABORDE further discloses wherein: the third means comprises a switch (col. 6, line 52-64; col. 10, line 1-15). However, the combination of LABORDE and HASHIKUKI does not expressly disclose the first and second means are on one side of the switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of

the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Regarding claim 11, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. LABORDE further discloses wherein: the third means comprises a switch (col. 6, line 52-64; col. 10, line 1-15). However, the combination of LABORDE and HASHIKUKI does not expressly disclose relative to the plurality of cell sites, the first means is arranged before the switch and the second means is arranged after the switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

Regarding claim 12, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. LABORDE further discloses wherein: the third means comprises a switch (col. 6, line 52-64; col. 10, line 1-15). However, the combination of LABORDE and HASHIKUKI does not expressly disclose relative to the plurality of cell sites, the first and second means are both arranged before the switch. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the arrangement of the system, since it has been held that rearranging parts of an invention involves only routine skill in the art. See *In re Japikse*, 86 USPQ 70.

6. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over LABORDE (US 5,303,287) in view of HASHIKUKI et al (US 6,141,392) in view of the applicant's disclosure of the prior art.

Regarding claim 4, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of LABORDE and HASHIKUKI does not expressly disclose wherein the one or more controllers include transceivers that transmit and receive RF signals according to respective protocols that are used by the wireless terminals. That applicant's disclosure of the prior art discloses wherein one or more controllers include transceivers that transmit and receive RF signals according to respective protocols that are used by the wireless terminals (Figure 1; paragraph 16; the network interface card are able to transmit and receive RF or IF signals). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LABORDE and HASHIKUKI to include the applicant's disclosure of the prior art, since communication RF signals using network interface cards is conventional in the art and provides wireless communication capabilities to a system.

Regarding claim 5, see the rejection of the parent claim concerning the subject matter this claim is dependent upon. However, the combination of LABORDE and HASHIKUKI does not expressly disclose wherein the central site is connected to the two or more cell sites via optical fibers, and each cell site comprises an optical transmitter and an optical receiver. That applicant's disclosure of the prior art discloses wherein a central site is connected to two or more cell sites via optical fibers, and each cell site

comp[ri]ses an optical transmitter and an optical receiver (Figure 1; paragraph 16; modulation and demodulation of optical signals). Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the combination of LABORDE and HASHIKUKI to include the applicant's disclosure of the prior art, since optical fiber connections is a known transmission means that provides fast and reliable propagation of data.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

MARKO et al (US 5,329,555) – Antenna diversity in a wireless communication system.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ARIEL BALAOING whose telephone number is (571)272-7317. The examiner can normally be reached on Monday-Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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